

Figure 1: SIP Architecture

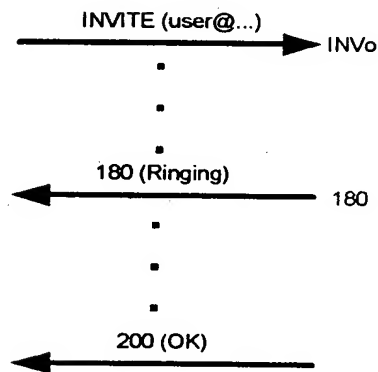


Figure 2: Unauthenticated Call Initiation

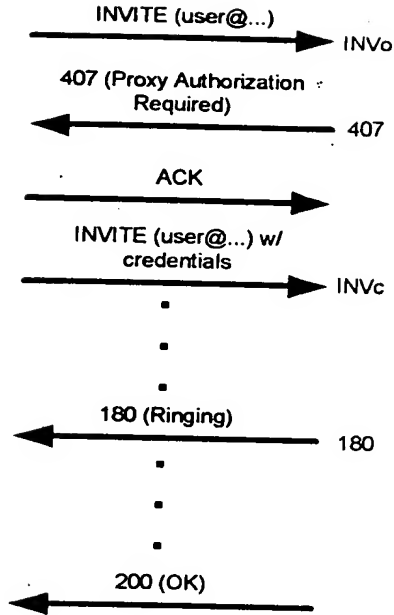


Figure 3: Full Authentication Call Initiation

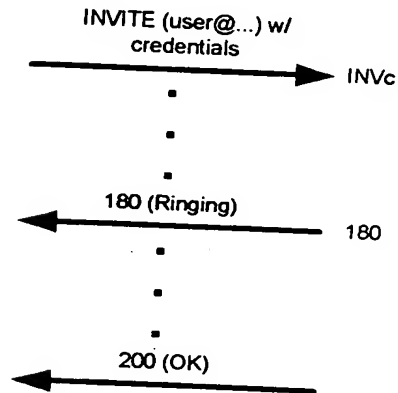


Figure 4: Pre-authenticated Call Initiation

$$0 \approx INV_o + INV_c - H - N_{180}$$

N_{180} represents outgoing 180 Ringing messages.

Figure 5: Attack Detection Equation

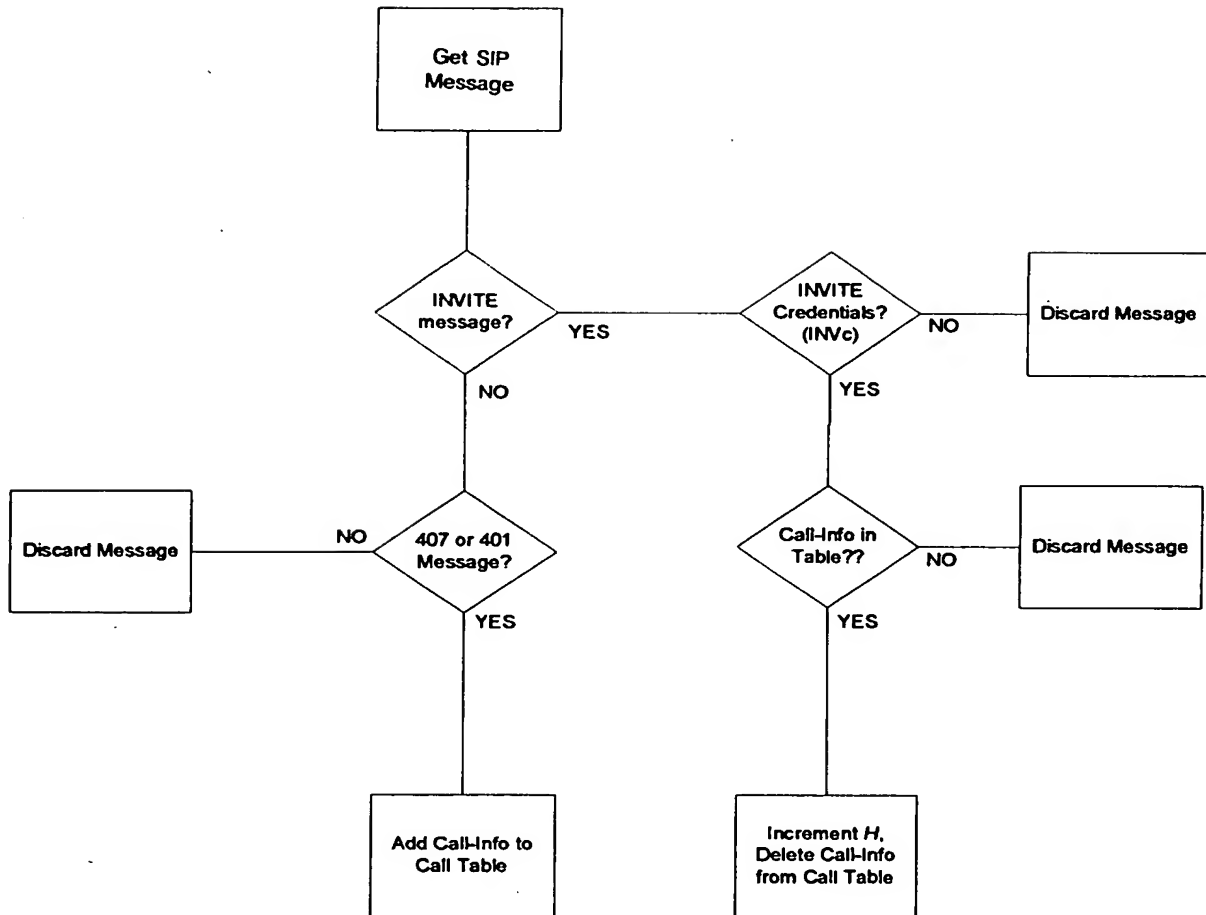


Figure 6: Hit Table Flowchart